

# **GRAVELY OPERATOR'S MANUAL**

NAME: 40" COMMERCIAL MOWER

PART NUMBER(S): 11362 - 40" Commercial Drive  
11368 - 40" Commercial Deck



40" COMMERCIAL MOWER ATTACHED TO C12 TRACTOR WITH DUAL WHEELS

## GENERAL

1. The 40" Commercial Mower is a front mount unit designed and built to give many years of excellent service. The mower is recommended for rough mowing conditions; has all gear drive from engine to mower, heavy-duty steel deck, rugged skids and casters, and 2 adjustable blades. The mower attaches to both 2 and 4 wheel tractors (see paragraph 3).
2. The Owner's Manual includes the parts list, setting up the mower, safety, operation, and maintenance instructions. Use the parts list for reference to individual part numbers. If further information is necessary contact the local Gravely dealer.
3. Height: 15-1/2" Weight: 182 lbs.  
Length: 34-3/4" Width: 42"  
Cutting Width: 40"  
Deck: Reinforced, welded steel.  
Drive: Right angle bevel gear, tapered roller bearings, cast iron housing, 2 self-adjusting spring tensioned V-belts.

Blades: 2 steel, hi-strength, hi-lift,  
20-1/2" length, 3/16" thick

Features: Adjustable casters, adjustable swivel action.

Purpose: Heavy mowing conditions.

Recommended for the following tractors:

7.6 - C10A - C12

424 - 430 - 432

810 - 812 - 814 - 816S

Required attaching kits:

7.6 - C10A - C12: None

424 - 430 - 432:

15840E1 Front Drive Kit

11601E1 Front Adapter Kit

810 - 812 - 814 - 816S:

19075E1 Front Drive Kit

11601E1 Front Adapter Kit

Recommended optional equipment for special applications:

7.6 - C10A - C12: None

Riding Tractors:

20181E1 Wheel Brake Kit, 800 Series

11924E1 Front Wheel Weights

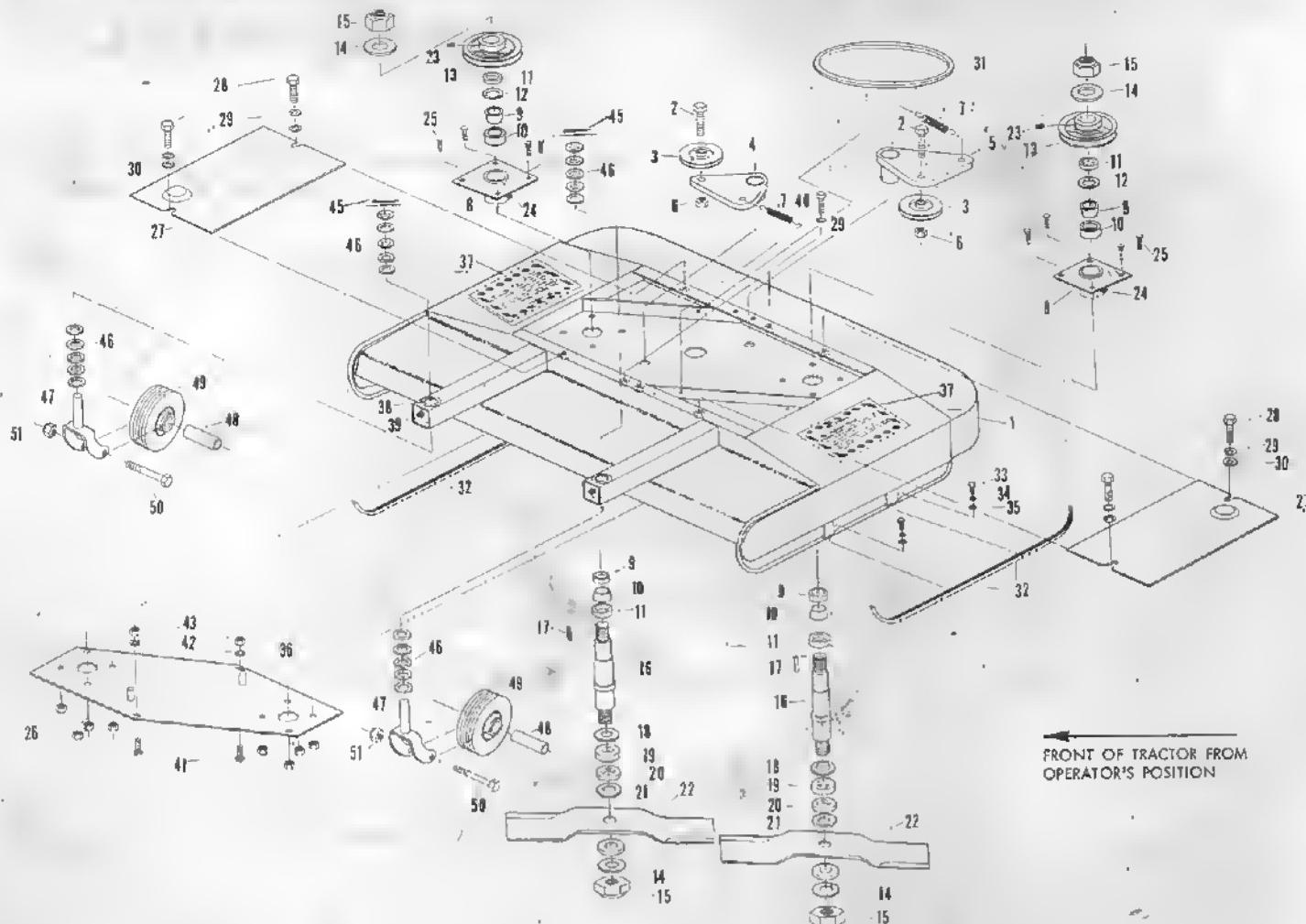
Recommend option for riding tractors without hydraulics:

11271E1 Lift Assist Kit

To continue its program of quality and design improvement, the manufacturer reserves the right to change specifications, designs and prices without notice and incurring obligation.

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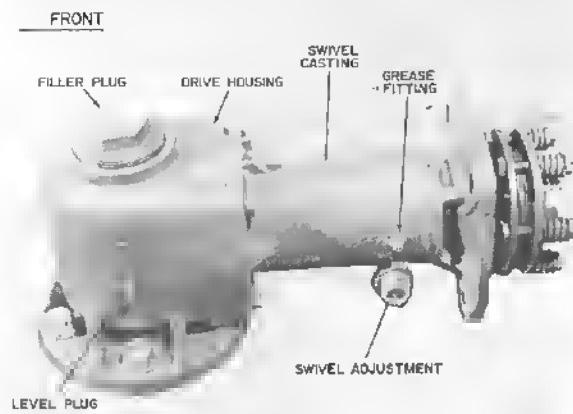


ITEM NO.	PART NO.	DESCRIPTION	
1	11369A1	Deck Weldment	25 120915 Bolt, 3/8-16 x 1 Rd. Hd. Sq. Nk.
2	180126	Bolt, Hex 3/8-16 x 1-1/2	26 456004 Nut, Lock 3/8-16 Washer Insert
3	9231P1	Idler	27 11384P1 Cover, Belt
4	11379A1	Arm, Idler Pivot Weldment	28 94286380 Bolt, 3/8-16 x 5/8 Hex Hd.
5	11382A1	Idler, Pivot Arm	29 120382 Washer, Lock 3/8 Sp.
6	456004	Nut, Lock 3/8-16 Washer Insert	30 120394 Washer, Flat 13/32 x 13/16 x .065
7	11263P1	Spring	31 9240P1 Belt, Drive
8	9200A1	Housing, Spindle Bearing Weldment	32 9223P2 Skid
9	9246F1	Bearing, Cones	33 181596 Bolt, 5/16-24 x 7/8 Hex Hd.
10	9245P1	Bearing, Race	34 120214 Washer, Lock 5/16 Sp.
11	9206P1	Seal, Oil	35 120393 Washer, Flat 11/32 x 13/16 x .065
12	9204P1	Ring, Seal	36 11376A1 Support, Deck Weldment
13	9207P1	Pulley, Rotor	37 18549P1 Decal, Danger
14	131001	Washer, Flat 31/32 x 2-1/4 x .165	38 11375P1 Bearing, Bronze
15	17313P1	Nut, Lock Esna 7/8-9 Heavy Thin	39 94110270 Fitting, Lube 1/4-28
16	9203P1	Shaft, Rotor	40 180122 Bolt, Hex 3/8-16 x 1
17	9213P1	Key, Square 1/4 x 1	41 120897 Bolt, 1/2-13 x 3 Rd. Hd. Sq. Nk..
18	9205P1	Shield, Dust	42 120384 Washer, Lock 1/2 Spring
19	9211P1	Collar, Blade Spacer 3/4"	43 120378 Nut, Hex 1/2-13
20	9210P1	Collar, Blade Spacer 1/2"	NS 9251A1 Guard, Weldment
21	9209P1	Collar, Blade Spacer 1/4"	45 137204 Pin, Cotter 1/8 x 1-1/2
22	9212P1	Blade, Mower	46 131017 Washer, Flat
23	102581	Screw, Set 5/16-18 x 3/8 Hex Socket	47 11385A1 Caster Fork Weldment
24	94110270	Fitting, Lube 1/4-28	48 11387P1 Bushing
			49 11386P1 Wheel, Caster
			50 180193 Bolt, Hex 1/2-13 x 3-3/4
			51 435507 Nut, Lock 1/2-13 Washer Insert

Complete 4" Rotary Mower Spindles R.H. #10398A1 and L.H. #10399A1  
Include Item Numbers 8 through 21 and Numbers 25 and 24

fig 1

3. Remove filler plug and level plug, fig 6. Fill the gear drive housing to the oil level plug with SAE 90 gear lubricant. Replace the plugs. Check the level periodically especially if signs of leakage are present.
4. Grease the swivel casting through the grease fitting on the casting with general purpose grease. Add grease until it comes out under the swivel adjustment fig 6. Regrease every 8 HOURS of operation.

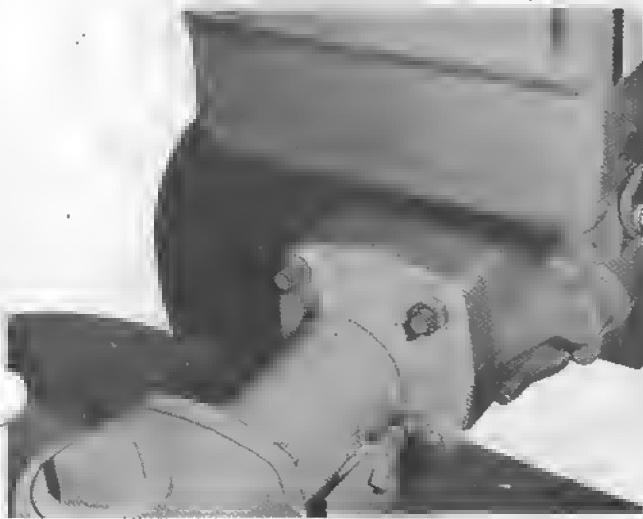


**fig 6**

#### DRIVE UNIT

#### INSTALLATION

1. Before attaching or detaching the mower, STOP the engine, put the PTO control in the "OUT" position.



**fig 7**

2. **7.6, C10A, C12 TRACTORS:**  
The mower attaches to the front of the tractors with 2 nuts and 2 bolts. Do not damage the threaded studs, fig 7.
3. **RIDING TRACTORS:**  
The mower attaches to the Front Adapter Kit with 2 nuts and 2 bolts. Do not damage the threaded studs, fig 8.



**fig 8**

#### SAFETY

1. **REFER** to the tractor Owners Manual to familiarize yourself with all controls before operation.
2. **DO NOT ALLOW PASSENGERS** to accompany operator at any time.
3. **DO NOT ALLOW CHILDREN** to operate equipment, nor allow adults to operate it without proper instruction.
4. **INSPECT WORK AREA** for rocks, glass, metal, bones, and any other foreign objects. Stay alert for holes and other hidden hazards.
5. **USE EXTREME CAUTION** when operating on slopes.
6. **REDUCE SPEED** on all side slopes and sharp turns.
7. **DO NOT OPERATE** equipment except from proper operator's position.
8. **KEEP SAFETY** devices and shields in place at all times.

## REMOVAL FROM TRACTOR

1. Reverse the procedure for attaching; see INSTALLATION, paragraphs 1 through 3.

## ADJUSTMENTS

9. **DISENGAGE POWER** to attachment and stop engine prior to making any adjustment or clearing the unit.
10. **DO NOT WEAR LOOSE** fitting clothing.
11. **KEEP HANDS**, feet, hair, clothing, etc., away from moving parts.
12. **KEEP BYSTANDERS** and pets removed from the work area.
13. **EXERCISE CAUTION** to avoid slipping or falling, especially when operating in reverse with two wheel tractors.
14. **DIRECT DISCHARGE** so as not to endanger life or property; such as people, pets, structures, cars, etc.

## OPERATION

1. Refer to the tractors Owners Manual for safety and operating instructions to engage and disengage the PTO (power take-off).
2. Operate the engine at full speed. In thick, lush growth reduce ground speed (not engine speed) to allow the mower enough time to cut and discharge.

## ROUTINE MAINTENANCE

1. Perform the lubrications as described in LUBRICATION, paragraphs 1 through 4.
2. Check each rotor shaft nut to insure tightness fig 1, Item 15. See ADJUSTMENTS, paragraph 6.
3. Check all nuts and bolts to insure tightness.
4. Sharpen and balance the blades.
5. Clear the mower of cuttings and debris.

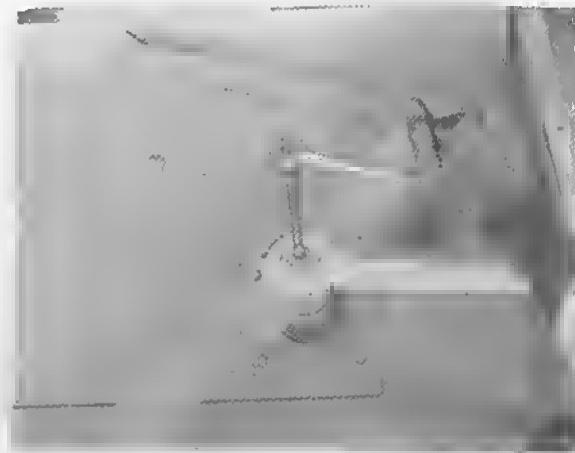


fig 9

3. **BLADE REMOVAL:** STOP the engine, Put the PTO in the OUT position. Put the operating levers in NEUTRAL. BE SURE the blades have stopped. Remove the mower from the tractor. Turn the mower upside down. Hold the rotor shaft with a 3/8" socket drive and remove the nut with a 15367E1 Gravely Wrench or equivalent, fig 9. Do not use the top spindle nut to hold the spindle from turning.
4. **BLADE SHARPENING:** Sharpen the blades. Balance after sharpening.
5. **CUTTING HEIGHT:** Place the collars above and/or below the blade for adjustment, fig 1, Items 19, 20, 21. Note that the collars are not the same thickness. Keep the same combination on both rotors.

## ASSEMBLY

1. Unpack the drive and deck.
2. Remove the belt covers, fig 1, Items 27.
3. Mount the idlers on the studs as in fig 2. Note the different sleeve lengths of the idlers. The short sleeve goes next to the high rotor and the tall sleeve goes next to the low rotor. Set the idlers on the studs with the extended sleeves down. Work from the rear of the mower.

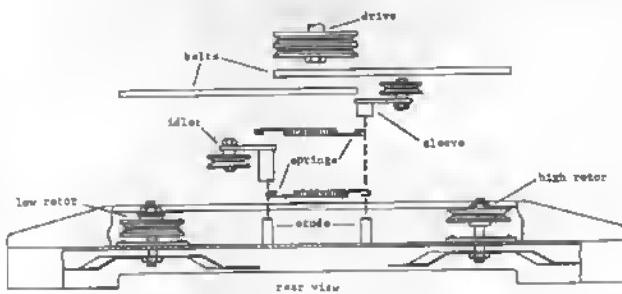


fig 2

4. Set the belts as in fig 3; low belt first. This belt positioning is important for ease of assembly.

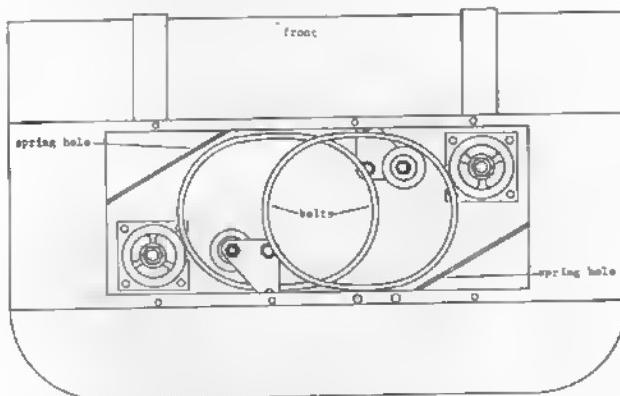


fig 3

5. Hook the springs to the idler assembly from underneath as in figs 2 & 4, solid lines.
6. Set the drive in position on the deck; do not bolt it down. Slip the belts on the drive pulley and then on the rotor pulleys. Let the idlers float at this time; solid lines, fig 4.

7. Bolt the drive to the deck. The 2 carriage bolts are inserted from under the deck, fig 1, Items 41, 42 & 43. Be sure that the heads seat properly in the deck. The 3 hex bolts fasten from the top, fig 1, Items 29 & 40. Start all bolts and nuts before tightening.

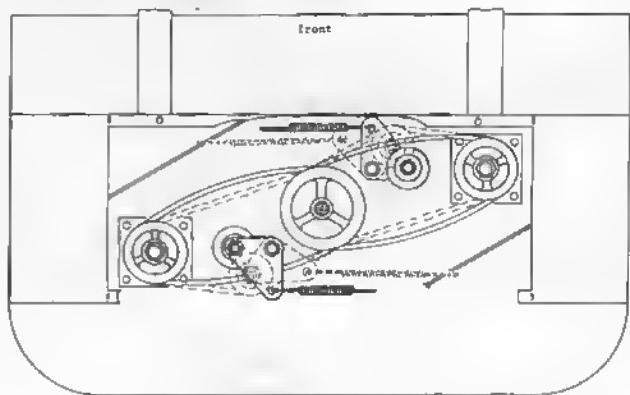
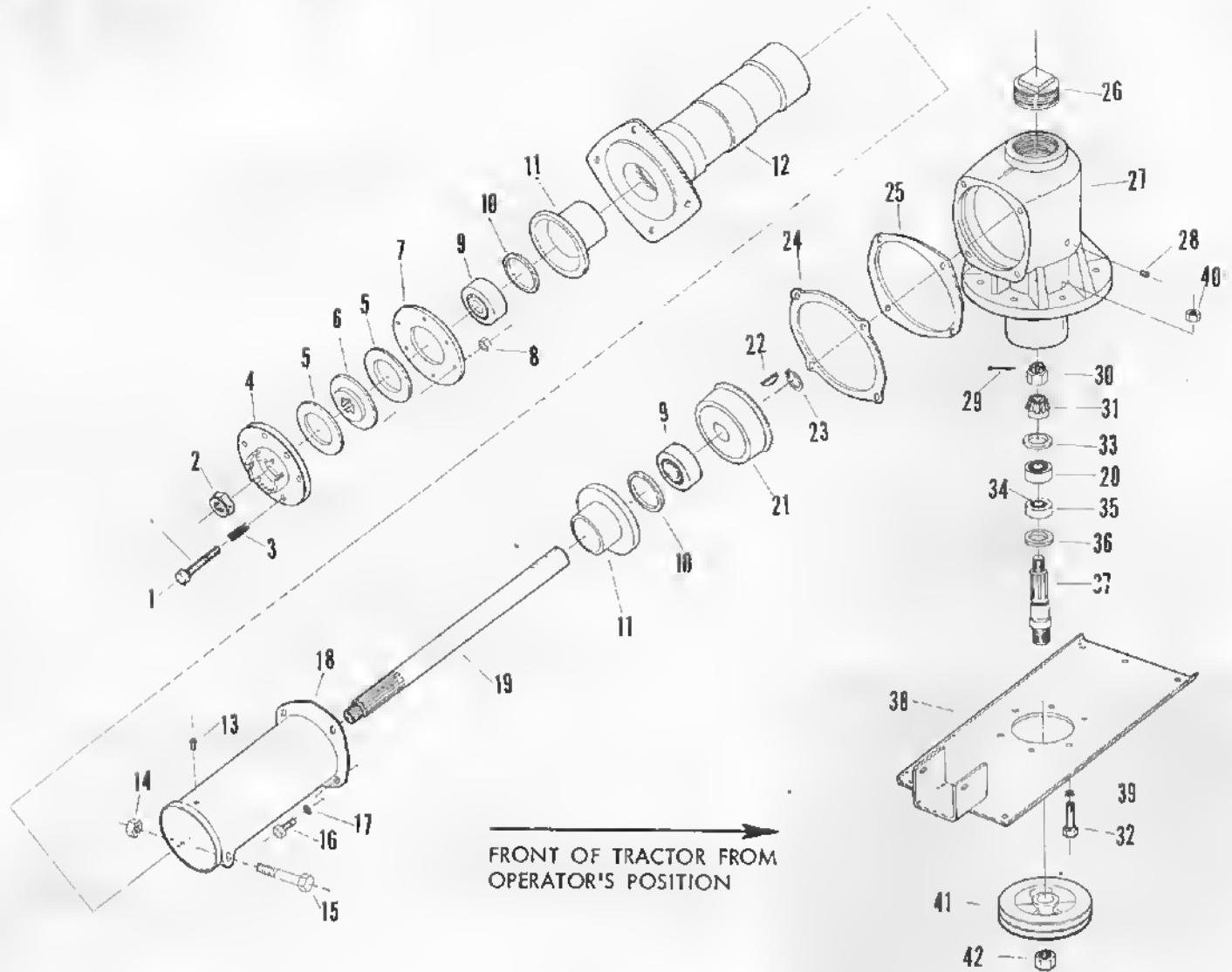


fig 4

8. Working from the sides, grip the springs with a spring puller or clamp-lock pliers or equivalent. Extend the spring hook up, over, and through the spring hole. The belts are now in tensioned running position; dotted lines fig 4.
9. Replace the belt covers.
10. Install the bushings in the caster wheels and bolt the wheels in the caster forks.

## LUBRICATION

1. Grease the spindle bearing weldment housing through the grease fitting, with general purpose grease fig 1, Item 8 & 24. Add grease until it comes out the vent hole; opposite side of the grease fitting. Regrease every 8 HOURS of operation or more often when operating in severe dust or sand.
2. Grease the bronze bearing and caster wheels through the grease fittings with general purpose grease fig 1, Items 38 & 49. Add grease until it comes out the bearings. Regrease periodically, especially when operating in severe dust or sand.



ITEM  
NO. PART NO. DESCRIPTION

1	181618	Bolt, Hex 5/16-24 x 1-3/4
2	13412P1	Nut, Lock Esna 5/8-18 Light Thin
3	12871P1	Spring
4	12867P1	Plate, Dog
5	12870P1	Washer, Friction
6	12869P1	Plate, Drive
7	12868P1	Plate, Back
8	18277P1	Nut, Lock Esna 5/16-24 Light Thin
9	13143P1	Bearing, Race
10	13144P1	Bearing, Cone
11	13122P1	Seal, Oil
12	12550P1	Retainer, Oil Seal
13	11815P1	Shaft, Housing
14	94110100	Fitting, Lube 1/8
14	435507	Nut, Lock 1/2-13 Washer Insert Hex
15	180193	Bolt, Hex 1/2-13 x 3-3/4
16	180122	Bolt, Hex 3/8-16 x 1
17	138542	Washer, Lock 3/8 Int Tooth
18	12023P1	Casting, Swivel
19	12566P1	Shaft, Drive
20	13145P1	Bearing, Roller Race
	13146P1	Bearing, Roller Cone

21	12862P1	Gear, Bevel
22	120502	Key, Woodruff 3/16 x 7/8 Hard
23	13187P1	Ring, Retaining
24	14101P1	Shim, Gear .020
	12490P1	Shim, Gear House .005
25	12491P1	Gasket
26	10499P1	Plug, Pipe 2 In. W/Filler Plug
27	9236P1	Housing, 42 In. Mower
28	103877	Plug, Pipe 1/8 In. Sq. Hd.
29	119120	Pin, Cotter 3/32 x 1-1/4
30	125384	Nut, Slotted 5/8-18 Hex Thick
31	12850P1	Gear, Bevel
32	9229P1	Bolt, Hex Special
33	12852P1	Shim, Gear
	13646P1	Shim, Gear .010
34	13142P1	Bearing, Roller Cone
35	13139P1	Bearing, Roller Cone
36	13171P1	Seal, Oil (Dual Lip)
37	11363P1	Shaft, Drive Rotor
38	11366A1	Plate, Mounting Weldment
39	120384	Washer, Lock 1/2 Spring
40	120378	Nut, Hex 1/2-13
41	11364P1	Sheave, Drive
42	11365P1	Nut, Special
NS	10102A1	Attachment Clutch Assembly

fig 5 ILLUSTRATED PARTS LIST (Cont.)

6. BLADE INSTALLATION: Place the blade and collars on the shaft at the desired cutting height. Put the flat washer and nut on as in
7. BELT REMOVAL: Remove the belt covers. Unhook one end of each spring; use a spring puller or clamp-lock pliers. Remove the drive. Remove the belts. See figs 2, 3, & 4. fig 1, Item 14 and 15. Hold the rotor shaft with a 3/8" socket drive and torque the nut to 100 ft. lbs. Similar tightness can be reached with a Gravely 11367E1 Wrench or any 16" length handle wrench when used by an average man, fig 9.
8. BELT INSTALLATION: See ASSEMBLY paragraphs 4, 6, 7, 8, and 9.
9. Safety clutch action is regulated by the attachment clutch assembly, fig 5, Items 1, 3, 4, 5, 6, 7 and 8. Loosen all 6 nuts, Items 8. Tighten the 6 bolts all the way into the threaded back plate, Items 1 & 7. Back off each bolt 1/2 turn. Lock the bolts in position with the nuts.

#### STORAGE

1. Perform all that applies from ROUTINE MAINTENANCE and LUBRICATION.
2. Apply a light coat of oil to preserve finish and appearance.



# **GRAVELY.**

## ATTACHMENT LIMITED WARRANTY

This Limited Warranty is issued by Clarke-Gravely Corporation, Gravely Division, and consists of the following terms:

1. Only the original purchaser of new Gravely manufactured attachments is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravely which are defective in material or workmanship. Gravely will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for NINETY (90) DAYS for attachments used in Roofer applications, and TWELVE (12) MONTHS for products used in all other applications.
4. Some components of Gravely attachments are not covered by the Gravely Warranty. These components are covered by the original manufacturer's warranty. They are:
  - (a) Tires - Goodyear, Goodrich, Armstrong, General and Firestone
5. To obtain warranty service on Gravely attachments including components not manufactured by Gravely, use this procedure:
  - (a) Notify the Gravely dealer from whom you purchased the attachment.
  - (b) If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravely dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
  - (c) Make arrangements to have the attachment delivered to the dealer (refer to paragraph 6(a) below).
  - (d) If you have any questions concerning the Gravely Warranty, they should be referred to:

Gravely  
Clarke-Gravely Corporation  
A Studebaker-Worthington Company  
One Gravely Lane  
Clemmons, N. C. 27012  
Attn: Manager of Customer Services
6. This Warranty does not cover the following:
  - (a) Transportation between owner's home or place of business and the dealership. If the dealer provides the transportation of the attachment, he will charge the owner his usual rate for such service.
  - (b) Normal maintenance services and normal replacement of items such as belts, lubricants, mower, plow or cultivator blades.
7. GRAVELY MAKES NO OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE PERIOD SET OUT IN PARAGRAPH 3 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE STATEMENT MAY NOT APPLY TO YOU.
8. GRAVELY SHALL HAVE NO RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, LOSS OF PROFITS OR COMMERCIAL LOSS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravely registration card is supplied with each Gravely attachment. Please complete the card and return it to Gravely at the address listed on the card. The registration card will be used by Gravely for:
  - (a) Recording date of purchase.
  - (b) Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary. The return of registration card is not required in order to take advantage of this Warranty.
11. This Warranty is not subject to change or modification by anyone, including Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.

